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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,647	11/27/2001	Chin-Lin Chang	112.P14065	7418

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EXAMINER	
CAPUTO, LISA M	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,647	CHANG, CHIN-LIN	
	Examiner	Art Unit	
	Lisa M. Caputo	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,10-15 and 18-23* is/are rejected.

7)☒ Claim(s) *7-9,16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the amendment filed 9 September 2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 10-13, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al. (U.S. Patent No. 5,144,117, from hereinafter "Hasegawa").

Hasegawa teaches an illumination type optical recorded information reading device. Regarding claims 1, 10 and 18, Hasegawa teaches a an apparatus and method utilizing a dual light source voltage-modulated reciprocal control circuit for a scanner, which comprises a voltage-modulation circuit (voltage regulator circuit 27) for generating a modulation voltage whose magnitude may be adjusted according to a square wave having a pulse width modulation capacity (binary coder circuit 8 includes known waveform shaping means), a first lamp driving circuit (plurality of light source drivers, including light source driver circuit 30 for light source 18, having a plurality of LEDs) for receiving the modulated voltage and driving a first lamp, a second lamp driving circuit (plurality of light source drivers, including light source driver circuit 30 for light source 18, having a plurality of LEDs) for receiving the modulated voltage and driving a second

lamp, and a reciprocal control circuit (switching circuit 29) for sending the modulated voltage to the first lamp driving circuit or the second lamp driving circuit according to the dictate of a reciprocal logic signal. Further, regarding claims 2-3, 11-12, and 19-20, Hasegawa teaches that the first lamp includes a back light and the second lamp includes a cover light when it is taught that the scanner is an illumination type optical recorded information reading device (see Figures 1-2, abstract, col 4 line 58 to col 5 line 21; col 7 line 18 to col 11 line 50).

Regarding claims 4, 13, and 21, Hasegawa teaches that the first lamp driving circuit and second lamp driving circuit are dc-to-ac converters for converting a direct current source to an alternating current source (see Figure 14, col 11, lines 28-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 5-6, 14-15, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa in view of McMahan et al. (U.S. Patent No. 4,504,951, from hereinafter "McMahan"). The teachings of Hasegawa have been discussed above.

Regarding claims 5-6, 14-15, and 22-23, the best prior art of Hasegawa fails to teach that the reciprocal control circuit further includes an application specific integrated circuit, a common emitter, and a Darlington circuit.

McMahan teaches a high speed switching power supply for a light controlled laser system. McMahan discloses that additional duty cycle control is achieved at pin 4 of circuit 49 by the slow start circuit including Darlington circuit 50. The base of the Darlington circuit is connected between capacitor C11 and resistor R22. The emitter of the Darlington stage is connected to resistor R23, across which is connected capacitor C10. The slow start circuit is used to provide a slowly building ramp voltage across capacitor C10 to gradually increase the duty cycle of the switching pulse trains from a low value to the desired value when the system is turned on. This prevents the laser voltage from building up too fast and thereby prevents a sudden current surge through the laser (see Figures 1-2, col 7, lines 59-68). Hence, McMahan teaches that a light controlled system utilizes a common circuit, the Darlington circuit.

In view of the teaching of McMahan, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the use of a common emitter circuit, Darlington circuit, and an application specific integrated circuit in the reciprocal control circuit in the teaching of Hasegawa in order to minimize the space used in the circuit board. Further, these circuits are conventional, efficient building blocks of circuit systems that are used for their optimal performance and are art recognized equivalents of the circuit systems used in Hasegawa because they are performing similar functions.

Allowable Subject Matter

4. Claims 7-9 and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of Hasegawa fails to specifically teach the arrangement of the components (i.e. resistors and transistors) of the common emitter circuit and Darlington circuit and how they relate to the other components of the overall system, including the fact that the Darlington circuit includes an IC having the IC label ULN2003.

Response to Arguments

6. Applicant's arguments filed 9 September 2005 have been fully considered but they are not persuasive.

7. In response to applicant's argument that Hasegawa does not teach the limitations of the claims, mainly the utilization of a reciprocal control circuit, examiner respectfully disagrees and submits that Hasegawa does indeed teach this circuit as can be seen by switching circuit 29, in communication with the power circuit 28 which provides voltage to the light source driver circuit 30 which in turns powers the light source 18 in a feedback manner as seen in Figure 2 (see col 7), which is reciprocal. It is also noted that since Hasegawa does indeed teach the reciprocal control circuit, McMahan is used to teach the limitations that Hasegawa does not teach, which as stated above, are that the reciprocal control circuit which has an application specific integrated circuit, and a common emitter circuit with a Darlington circuit.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Lisa M. Caputo*** whose telephone number is **(571) 272-2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-2398.** The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[lisa.caputo@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMC
November 27, 2005

MICHAEL G. LEE
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